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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,574	12/20/2001	Thomas Owens	87354.2781	3781

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EXAMINER
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MATTHEW, AARON D

ART UNIT	PAPER NUMBER
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2114

DATE MAILED: 05/26/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

P29

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/022,574	OWENS, THOMAS	
	<b>Examiner</b>	<b>Art Unit</b>	
	Aaron D Matthew	2114	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____.  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

***Priority***

1. If applicant desires priority under 35 U.S.C. 119 (e) based upon a previously filed application, specific reference to the earlier filed application must be made in the instant application. For benefit claims under 35 U.S.C. 120, 121 or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of the applications. This should appear as the first sentence of the specification following the title, preferably as a separate paragraph unless it appears in an application data sheet.

***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Fig. 2, element 28. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Fig. 3, element 78. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Specification***

4. The disclosure is objected to because of the following informalities:

- The phrase, "low-cost application for automatically bring a backup server on-line," on page 4, line 1, is unclear. Examiner suggests replacing the word "for" with "to."
- The figure on page 12, line 15 is mislabeled. It should read, "FIG. 3."

Appropriate correction is required.

***Claim Objections***

5. Claims 1-20 have been examined.

6. Claims 1-20 are objected to because of the following informalities: the language, "within the time period," in the phrase, "time period elapses wherein the response is not received within the time period," (claim 1, line 11; claim 6, lines 3-4; claim 13, lines 7-8; claim 16, lines 3-4; claim 20, lines 11-12) is redundant, and should be removed.

Appropriate correction is required.

Claims 2-5, 7-12, and 17-19 are objected to based on their dependence on the aforementioned claims.

7. Claims 13-19 are objected to because of the following informalities: the words, "using a signal," are redundant in the context of line 4, in claim 13, and should be removed to improve clarity in the claim language.

Appropriate correction is required.

Claims 14-19 are objected to based on their dependence on claim 13.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claim 12 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a second server that will attempt to operate as the primary server when discovering that a monitor server is already operational, does not reasonably provide enablement for operating the second server as a primary server when there is no response to a signal sent to the monitor server address. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims.

The disclosure, in view of the drawings, makes it clear that if a server, which is associated with a monitor server address, attempts to operate as the monitor server, but discovers another server already operating as the monitor server at the monitor server address, it will thereafter perform the steps of attempting to operate as the

primary server, (note Fig. 1 and 2). Moreover, if a server in the system is not currently operating as a primary or monitoring server, it will continue to attempt to fill each position in succession until one requires replacement. The claim language appears to disclose a step in which a server attempts to operate as a monitor server, discovers that the monitor server position is filled, and thereafter performs the functions of a primary server. Such a step is not disclosed in the specification, and is outside the scope of enablement. The language of claim 12 will hereafter be interpreted as described above, and as disclosed on pages 11-12, in what the examiner identifies as the preferred embodiment of applicant's invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-12 and 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the step of booting the first server" in line 12. There is insufficient antecedent basis for this limitation in the claim. Examiner suggests changing the phrase to read, "a step of booting the first server."

Claim 19 discloses a processor on line 9. As claim 19 is dependent on 13, which already discloses a processor on line 3, this language is indefinite. The language on

line 9 should either be eliminated or be changed so as to further limit the processor as disclosed in claim 19. Though line 3 of claim 13 discloses a "computer processor," the word "processor," as it appears on line 9 of claim 19, and as it is known in the art, is considered synonymous with the phrase, "computer processor."

Claims 2-12 are rejected based on their dependence on claim 1.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-7, 9-11, and 13-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Coile et al (U.S. 6,108,300).

In the forthcoming explanations, it will be assumed that an ability to respond to packets sent to an address, as discussed in the context of network devices disclosed by Coile et al, inherently requires communication capability with a network. Said assumption is in accordance with the general knowledge expected of one of ordinary skill in the art at the time of applicant's invention.

Regarding claim 1, Coile et al. teaches a method for providing backup server support, (see Abstract), comprising:

- Operating a first server wherein the first server is capable of communication with a network, (col. 5, lines 55-61), and is associated with a primary server address, (note col. 5, lines 18-19);
- Maintaining a second server wherein the second server is capable of communication with the network, (col. 5, lines 61-65), configured in parallel with the first server, (note col. 6, lines 46-52), and is associated with a monitor server address, (col. 5, lines 32-34);
- Periodic messages sent between primary and secondary servers, (see col. 6, lines 14-22). According to the understanding of one of ordinary skill in the art, a message sent between two servers incorporates some form of signal, and therefore, Coile et al. teaches the following:
  - i. Signaling, using a first signal, the primary server address;
  - ii. Monitoring for a response to the first signal within a predetermined time period; and
  - iii. Repeating the signaling step and the monitoring step until a time period elapses, ("prescribed interval"), wherein the response is not received.

Moreover, the language in claim 16 of Coile et al, lines 3-5 discloses that the primary network device can become active if the primary network device is reset. Therefore,



Coile et al also teaches the step of booting the first server after a response is not received and the server has failed, (See also col. 9, lines 25-28).

Regarding claims 13 and 20, the two servers operating in parallel, as disclosed by Coile et al, are inherently redundant. The backup server receives identical configuration data, must inherit all the functions of a failing primary server, and must perform identically in the event of said failure. Moreover, as they are both disclosed as computer network devices, the system functions described above and as applied to claim 1, inherently comprise a carrier containing computer program instructions thereon. Therefore, as explained above, said computer program instructions are disclosed as instructing a computer processor to perform the following steps:

- Signaling a primary server address;
- Monitoring for a response to the signal within a predetermined time period;  
and
- Repeating the signaling step and the monitoring step until a time period elapses wherein a response is not received, and thereafter performing a step of booting the first server.

As per claim 20, Coile et al teaches a first computing apparatus communicatively connected to a network, (col. 5, lines 55-61), and corresponding to a primary server address, (col. 5 lines 18-19), and a second computing apparatus in communication with the network, (col. 5, lines 61-65), and configured in parallel with the first computing apparatus, (note col. 6, lines 46-52), and associated with a monitor server

address, (col. 5, lines 32-34). A server, as disclosed by Coile et al and as understood by one of ordinary skill in the art, is inherently a computing apparatus.

Regarding claims 2 and 14, two servers are disclosed, that can operate as either a primary or a backup, (col. 5, lines 25-32). Coile et al, therefore, in reference to Fig. 9, elements 916 and 922, discloses a first and a second server including a first server memory and a second server memory respectively. As Coile et al teaches a means for copying data from the first server memory to the second server memory, (col. 6, lines 46-54), that is coincident with the process of periodically signaling the two servers, it is inherent in the design that data is copied from the first server memory to the second server memory after the signaling step is repeated a predetermined number of times.

Regarding claims 3, 5 and 15, see col. 4, lines 15-16, wherein the second server is operated as the first, in providing server services to the network, when the first has failed.

Regarding claim 4, see col. 5, lines 20-25, wherein the operating step comprises providing server services to the network.

As per claims 6 and 16, as it is disclosed in col. 4, lines 5-16, the second server is maintained in a backup mode so that the second server can be associated with the

primary server address, (col. 4, lines 11-13), when a time period elapses wherein the response is not received.

Regarding claims 7 and 17, the primary server address is an Internet protocol address in the embodiment disclosed in col. 4, lines 15-16.

Regarding claims 9 and 18, Fig. 5 discloses a process flow diagram illustrating that a response to the first signal in the time period is indicative of operation of the first server as the primary server, and an absence of the response to the first signal in the time period is indicative of primary server malfunction or inactivity.

As per claim 10, Coile et al teaches the use of confirmation signals directed to both the primary and secondary server addresses to check both servers for failure (see col. 6, lines 14-22). The signals are sent periodically, and, therefore, the steps of:

- Signaling, using a second signal, the monitor server address; and
- Monitoring for a response to the second signal within a second time period;

Are disclosed.

Regarding claim 11, if a response to the second signal, (confirmation message from the primary server), is received within the given time period, the second server is operated as normal, (i.e. as a monitor or backup server), and continues to check the primary server for failure. Figure 5 shows a process flow diagram that illustrates the

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process by which a primary or backup network device is either failed, or allowed to proceed in its current operation.

Regarding claim 19, two servers are disclosed, that can operate as either a primary or a backup, (col. 5, lines 25-32). Coile et al, therefore, in reference to Fig. 9, elements 916 and 922, discloses a first and a second server including a first server memory and a second server memory respectively. Both servers are inherently considered computing apparatuses that are communicatively connected to a network, (see col.5 lines 55-65), the first and second server corresponding to a primary server address, (col. 5, lines 18-19), and secondary server address, (col. 5, lines 32-34), respectively.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coile et al as applied to claim 1 above, and further in view of Midgeley et al (U.S. 5,592,611).

Coile et al discloses a ping test, (col. 11, lines 11-17), consisting of sending out a broadcast ping request.

Coile et al fails to disclose a step of pinging the primary server address.

Midgeley et al teaches a server periodically broadcasting a "Service Advertising Protocol" (SAP) packet in response to a ping broadcast by a client, (col. 8, lines 6-12).

Midgeley et al and Coile et al are considered analogous art as they both teach a multiple server environment in which at least one server is used to replace another should the latter fail.

The preferred embodiment of applicant's invention, as disclosed in the language of claim 8, comprises the use of a ping protocol for determining the operational status of a primary server. Midgeley et al teaches the use of the ping protocol by a client in an attempt to receive an SAP packet from a server, and establish a connection.

The use of a ping protocol is well known in the art, and has been defined in The American Heritage College Dictionary as a means for a computer to determine whether another computer is reachable. It would have been clearly recognized by one of ordinary skill in the art that a computer that is not reachable may very well have experienced some failure. Therefore, one of ordinary skill in the art at the time of applicant's invention would have found it obvious, and would have been properly motivated, to use the ping protocol as a means of determining whether a primary server has failed.

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coile et al as applied to claims 1 and 10 above, and further in view of Li et al (U.S. 5,473,599).

As best understood by the examiner, the preferred embodiment of applicant's invention teaches that a server attempting to operate as a monitor server, (see Fig. 2), will attempt to operate as primary server, (see Fig. 1), when discovering that another server is already operating as monitor server at the monitor server address. The examiner will assume that the phrase, "the second server is thereafter operated as a primary server," on lines 2-3 of claim 12, is referring to the aforementioned process as diagramed in Figures 1 and 2, and as detailed in the disclosure on pages 11-12. Therefore, a lack of response to the second signal within the second time period is equivalent to the second server discovering another server operating at the monitor server address.

Coile et al teaches a system in which a primary network device will not take over for a standby device if the primary network device discovers that the standby device is already active, (col. 11, lines 49-54).

Coile et al fails to teach a system in which a backup device is operated as a primary device in the event that it discovers another device already operating as a backup device.

Li et al discloses a system of routers comprising an active router and a standby router, as well as a group of inactive routers that can be used to replace either an active or standby router, (see Abstract). In col. 10, lines 14-31, a process is disclosed in which a new router does not receive a response to a signal sent to the current standby router, (col. 10, lines 18-19), discovers another inactive router of

higher priority, (col. 10, lines 24-27), and is thereafter available to take the place of a primary server, (col. 2, lines 44-46). It is also disclosed that, should the new router discover another router acting as standby router, the new router would also thereafter be available to take the place of a primary server, (see col. 2, lines 44-46). This offers the advantage of having more than one router always available to fill a deficiency in either the primary or standby roles.

Coile et al and Li et al are considered analogous art because they both disclose systems in which a primary network device is backed up by a standby network device. Moreover, these systems both involve automatic signaling between the primary and standby devices to determine when a device requires replacement, and to facilitate automatic replacement.

One of ordinary skill in the art at the time of applicant's invention would have clearly understood the advantages of allowing all network devices in a system to quickly fill a deficiency in either the primary or standby roles as disclosed in Coile et al and Li et al. It would have been obvious to one of ordinary skill in the art that, a server that was previously available to fill in as a primary or secondary server, when attempting to serve as standby server and discovering that that role is already filled, should again be made available to fill in, as needed, in either a primary or secondary role. Though Coile et al does not explicitly teach the step in which a server discovers the standby role is filled, and thereafter attempts to perform the role of the primary, Coile et al does teach a system in which any server is able to identify another as being active and will attempt to provide backup services if another backup server is not

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present, (see Fig. 7). One of ordinary skill in the art at the time of applicant's invention would have been properly motivated to include the step of a server attempting to fill a primary role when discovering the standby is filled in order to increase the responsiveness of the system to a deficiency in either the standby or primary roles.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron D Matthew whose telephone number is (703) 605-1211. The examiner can normally be reached from 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W Beausoliel can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ADM

  
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